

Amendments to the Claims

This listing of claims will replace all prior listings of claims in the application.

Listing of Claims

1-2. (Canceled)

3. (Currently Amended) The treating solution according to claim 18, further containing 1000 to 50000 ppm of a ~~nitrate~~nitric acid group.

4. (Previously Presented) The treating solution according to claim 18, further containing at least one oxygen acid and/or salt of oxygen acid selected from the group consisting of HClO_3 , HBrO_3 , HNO_2 , HNO_3 , HMnO_4 , HVO_3 , H_2O_2 , H_2WO_4 , H_2MoO_4 and salts thereof.

5. (Previously Presented) The treating solution according to claim 18, further containing at least one polymer compound selected from the group consisting of water-soluble polymer compounds and water-dispersible polymer compounds.

6. (Currently Amended) The treating solution according to claim 18, further containing at least one surface-active agent selected from the group consisting of a nonionic surface-active agent, anionic surface-active agent and cationic surface-active agent.

7. (Previously Presented) A method for surface treatment of a metal comprising, contacting independently or collectively at least one metal material selected from the group consisting of a ferriferous material, a zinciferous material, an aluminiferous material and a magnesiferous material with the treating solution according to claim 18.

8. (Previously Presented) The method according to claim 7, comprising, further contacting the at least one metal material with an acidic aqueous solution of a compound containing at least one element selected from the group consisting of cobalt, nickel, tin, copper, titanium and zirconium, after contact with the treating solution, with or without washing by water.

9. (Previously Presented) The method according to claim 7, comprising, further contacting the at least one metal material with a treating solution containing at least one polymer compound selected from water-soluble polymer compounds and water-dispersible polymer compounds, after contact with the treating solution, with or without washing by water.

10. (Currently Amended) A method for surface treatment of a metal comprising, electrolytically treating the at least one metal material in the treating solution for surface treatment of claim 18, wherein the at least one metal material is a cathode.

11. (Previously Presented) The method for surface treatment of metal according to claim 10, comprising, further contacting the at least one metal material with an acidic aqueous solution of a compound containing at least one element selected from the group consisting of cobalt, nickel, tin, copper, titanium and zirconium, after electrolytic treatment in the treating solution, with or without washing by water.

12. (Currently Amended) The method for surface treatment of metal according to claim 10, comprising, further contacting the at least one metal material with a ~~treating~~ solution containing at least one polymer compound selected from water-soluble polymer compounds and water-dispersible

polymer compounds, after electrolytic treatment in the treating solution, with or without washing by water.

13. (Previously Presented) A method for surface treatment of metal comprising, contacting independently or collectively at least one metal material selected from the group consisting of a ferriferous material, a zinciferous material, an aluminiferous material and a magnesiferous material, whose surface is not degreased and cleaned with the treating solution according to claim 6.

14. (Currently Amended) A metal material having a surface-treated film containing ~~at least one metal element selected from the group consisting of titanium and zirconium~~ formed on a surface of an iron metal material by the method according to claim 7, wherein an adhesion amount of the surface-treated film, calculated as ~~the metal element~~ zirconium, is 30mg/m² or more.

15. (Currently Amended) A metal material having a surface-treated film containing ~~at least one metal element selected from the group consisting of titanium and zirconium~~ formed on a surface of a zinc metal material by the method according to claim 7, wherein an adhesion amount of the surface-treated film, calculated as ~~the metal element~~ zirconium, is 20mg/m² or more.

16. (Currently Amended) A metal material having a surface-treated film containing ~~at least one metal element selected from the group consisting of titanium and zirconium~~ formed on a surface of an aluminum metal material by the method according to claim 7, wherein an adhesion amount of the surface-treated film, calculated as ~~the metal element~~ zirconium, is 10mg/m² or more.

17. (Currently Amended) A metal material having a surface-treated film containing ~~at least one metal element selected from the group consisting of titanium and zirconium~~ formed on a surface of a magnesium metal material by the method according to claim 7, wherein an adhesion amount of the surface-treated film, calculated as ~~the metal element~~ zirconium, is 10mg/m² or more.

18. (Currently Amended) An aqueous surface-treating solution capable of treating independently or collectively at least one metal material selected from the group consisting of a ferriferous material, a zinciferous material, an aluminiferous material and a magnesiferous material, the treating solution ~~containing~~ consisting essentially of 5 to 5000 ppm of a zirconium compound, calculated as metal zirconium, 0.1 to 100 ppm of free fluorine ion, at least one compound selected from the group consisting of 5 to 100 ppm of a calcium compound, calculated as metal calcium, ~~10 to 5000 ppm of a magnesium compound, calculated as metal magnesium, and~~ 10 to 5000 ppm of a strontium compound, calculated as metal strontium and, optionally, 1000 to 50000 ppm of a nitric acid group, at least one oxygen acid and/or salt of an oxygen acid selected from the group consisting of HClO₃, HBrO₃, HNO₂, HNO₃, HMnO₄, HVO₃, H₂O₂, H₂WO₄, H₂MoO₄ and salts thereof, at least one polymer compound selected from the group consisting of water-soluble compounds and water-dispersible polymer compounds and at least one surface-active agent selected from the group consisting of a nonionic surface-active agent, anionic surface active agent and cationic surface-active agent and having a pH of 2 to 6.